AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) An antenna comprising:

an active face, at least one radiating element for transmitting radio frequency (RF) signals via the active face, and a metal free thermal control film covering the active face, the metal free thermal control film comprising:

a multi-layer interference filter having alternating higher and lower refractive index layers arranged to filter **[[**the**]]** optical radiation based on interference effects between different components of the optical radiation produced by reflection at the boundaries between the layers, said control film exhibiting preselected (or substantially) high absorbency and emissive characteristics in the infrared wavelength range 2.5μm to 50μm**[[**,**]]** and low absorbency characteristics in the solar spectrum range 200-2500nm to limit solar input and allow heat dissipated in the antenna to be radiated into space via the active face, the control film further exhibiting (preselected or substantially) **[[**and**]]** high transmissive characteristics in the microwave frequency spectrum 1 to 30GHz to allow the RF signals to be transmitted via the active face**[[**,**]]** ~~wherein the thermal control film allows heat dissipated in the antenna to be radiated into space via the active face~~.

2. - 3. (Cancelled)

4. (Previously Presented) The antenna according to claim 1, wherein the film is in the form of a flexible sheet.

5. (Canceled)

6. (Previously Presented) The antenna according to claim 1 wherein the multi-layer interference filter is a polymeric structure.

7. (Previously Presented) The antenna according to claim 1, wherein the multi-layer interference filter comprises one or more layers of any of combination of SiO_2, SiO_xN_y ,and Si_3N_4.

8. (Previously Presented) The antenna according to claim 7, wherein the film is in the form of a plurality of tiles.

9. (Previously Presented) The antenna according to claim 1, wherein the thickness of the film is less than 200 microns.

10. (Previously Presented) The antenna according to claim 1, wherein the thickness of the film is in the range of 50 to150 microns.

11.-13. (Cancelled)

14. (Previously Presented) The antenna according to claim 4 wherein the multi-layer interference filter is a polymeric structure.

15. (Previously Presented) The antenna according to claim 14, wherein the multi-layer interference filter comprises one or more layers of any of combination of SiO_2, SiO_xN_y ,and Si_3N_4.

16. (Previously Presented) The antenna according to claim 15, wherein the film is in the form of a plurality of tiles.

17. (Previously Presented) The antenna according to claim 16, wherein the thickness of the film is less than 200microns.

18. (Previously Presented) The antenna according to claim 17, wherein the thickness of the film is in the range of 50 to150microns.

19.-20. (Canceled)

21. (Previously Presented) The antenna according to claim 1 wherein the film is formed by applying a liquid coating to a surface of the spacecraft.

22. (Canceled)